SIEMENS

FC10

Fire detection control unit

Operating instructions

Fire & Security Products

Siemens Building Technologies

1 About this document

Purpose of the document
This document describes the operation of the fire detection control unit. Please read the operating instructions thoroughly, to ensure that you manage the operation of the control unit in case of fire.

Target group
This document is intended for persons operating the fire detection control unit.

Operational and safety regulations

i | Before groups of persons begin work on the system they must have read and understood the related documents, in particular Chapter 2 "Safety regulations".

Disregard of the safety regulations
Before they are delivered, products are tested to ensure they function correctly when used properly. Siemens disclaims all liability for damage or injuries caused by the incorrect application of the instructions or disregard of warnings of danger contained in the documentation. This applies in particular to personal injury or damage

- caused by improper use and incorrect use,
- caused by disregarding safety instructions in the documentation or on the product,
- caused by poor maintenance or a lack of maintenance.

Standard symbols

→	Result, note
'Text'	Quotation, reproduced identically

Abbreviations

Abbreviation	Definition
RT	Remote transmission

Document identification

Position	Signification
Title page	– System names – Product type – Purpose of document
Last page bottom left	– Document number – – Version
Last page bottom right	– Manual – Section

Modification index

Version	Date	Brief description
007995_a_en_--	04.2004	First edition

2 Safety regulations

This chapter describes the danger levels and the relevant safety regulations applicable for the use of our products. Please read the work instructions as well as the chapter "About this document" thoroughly before beginning any work.

2.1 Signal words and symbols

2.1.1 Classification and meaning of signal words

The danger level – that is, the severity and probability of danger – is indicated by the signal words listed below. Non-observance may lead to the consequences indicated:

DANGER!	Imminent danger! ● May cause danger to life or serious bodily injury!
WARNING!	Dangerous situation! ● May cause serious bodily harm.
CAUTION!	May cause dangerous situations! ● May cause light injuries!
NOTE!	Possibly harmful situation! ● May cause damage to the product or to objects in the immediate vicinity of the product!

2.1.2 Symbols and their meaning

The symbols listed below indicate the nature and origin of the danger.

General danger

Electrical voltage

Example for an indication of danger
The example below illustrates the appearance and form of danger warnings in our documents.

	DANGER!	**External voltage** Disconnect the module from the power supply.

2.1.3 Classification and meaning of additional symbols

i	Tips and information.
STOP	Refers to extremely important or critical decisions to be taken into account before continuing the work.

2.2   Safety-relevant working instructions

Country-specific standards

The products are developed and produced in compliance with the relevant international and European safety standards. Should additional country-specific, local safety standards or regulations concerning project planning, installation, operation and disposal of the product apply in the place of operation, then these standards or regulations must also be taken into account in addition to the safety regulations mentioned in the product documentation.

Please especially consider the following instructions:
- Do not open the device!.
- If any tools or accessories such as ladders are required, safe and suitable devices must be used.
- Prevention of spurious tripping of the remote transmission must be assured.
- Inform the alarm and fault receiving stations connected to the system (e.g. fire brigade) before carrying out the tests.
- Activate fire control installations for test purposes only when you are sure that no damage will be caused.

3 System overview

3.1 General

The fire detection system consists of the following modules:
- Detectors (detection)
- Control unit (evaluation)
- Alarm devices (alarming)
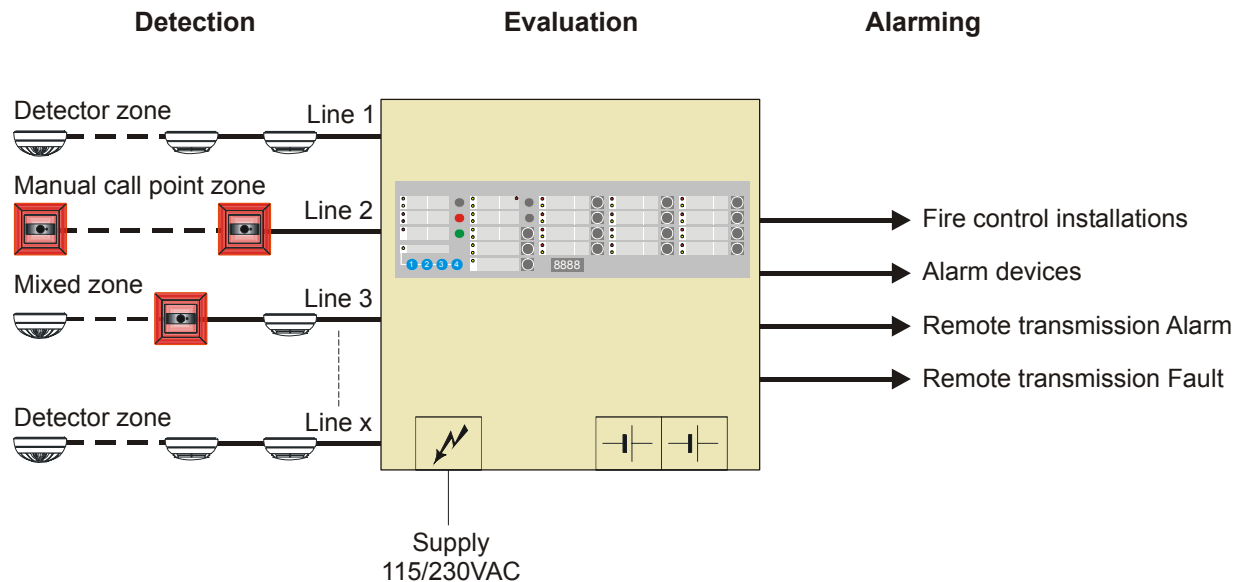
Fig. 1   Setup of a fire detection system

Detectors
With detectors, we distinguish between automatic detectors and manual call points. Automatic detectors monitor a room and automatically trigger alarm in case of fire. Depending on the type, automatic detectors may react on smoke, flames, or temperature.
Manual call points must always be actuated by a person.

Control unit
All detectors and alarm devices are connected to the fire detection control unit. If a detector gives alarm, this alarm signal is transmitted to the control unit. The control unit decides how the alarm shall be processed. This also applies for fault signals. The processing of alarms and faults differs from one control unit type to the next. It is e.g. possible to automatically alert the fire brigade, or to activate signal horns.

Alarm devices
Alarm devices only come into operation in case of alarm. In case of alarm, the signal horns and flash-lights are activated via control lines. In addition, it is possible to transmit the alarm to an external receiving station (e.g. fire brigade) via a remote transmission device (RT). In case of fault, it is also possible to inform an external receiving station.

3.2   System configuration

Each fire detection system is configured individually. The configuration has an influence on the operation. The table below shows the configuration of your fire detection system.

Parameters	Functions and configuration
Operating access	❏ via password ❏ via key switch
Remote transmission of alarms	❏ yes ❏ no
Alarm sequence involving present staff	❏ yes ❏ no
Switchover from 'Manned' to 'Unmanned'	❏ automatic ❏ manual
automatic switchover time from 'Manned' to "Unmanned"	❏ indicate ❏ do not indicate
1. automatic switchover time from 'Manned' to "Unmanned"	❏ 18:00 ❏ _____
2. automatic switchover time from 'Manned' to "Unmanned"	❏ not activated ❏ _____
Delay period V1	____ minutes
Delay period V2	____ minutes
Switchover summer time / winter time	❏ automatic ❏ manual
Remote transmission of faults	❏ yes ❏ no
Function Evacuate	❏ activated ❏ not activated
Access to Acknowledge	❏ always possible ❏ only with password/key switch
Faults must be reset	❏ yes ❏ no
Faults are always immediately transmitted to the receiving station	❏ yes ❏ no
Manual call points in mixed detector zones trigger alarm also when the detector zone is switched off	❏ yes ❏ no
Maximum operating time without mains supply	_____ h
Building plan handed over	❏ on: _____ by: _____

Tab. 1   System configuration

4 Structure and function

This chapter describes the setup and function of the fire detection control unit. It provides the reader with an overview of the possibilities offered by the fire detection control unit. An exact description of the different procedures is included in the sections 'Operation' and 'Maintenance'.

4.1 Indicators and operating modules

The figure below shows the indicators and operating modules. Depending on the type (number of zones), your control units comprises more or fewer zone keys. The function of the zone keys is the same with all control unit types.
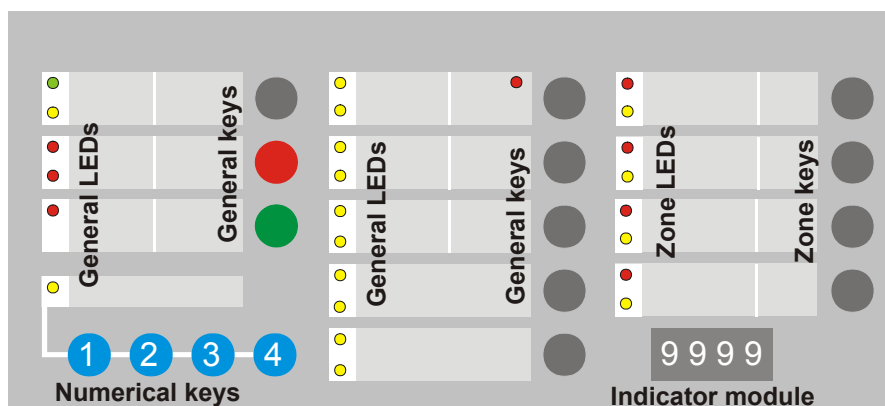
Fig. 2   Indicators and operating modules

The operating panel comprises the following elements:
- Light emitting diodes (LED)
- Keys
- Indicator modules (on option)
- Key switch (on option)

LED

Designation	Function
General LEDs	Indicate the status of the entire system.
Zone LEDs	Indicate the status of the individual zones. One red and one yellow LED is allocated to each zone.

Tab. 2   Function of the LEDs

General:
red LED = alarm
yellow LED = fault, or a part of the system is switched off

Keys

Designation	Function
General keys	General entries, e.g. Acknowledge
Zone keys	Allocate selected functions to the zone; one key is allocated to each zone
Numeric keys	Entry of numeric values

Tab. 3   Function of the keys

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Indicator module
The indicator module is optional and is possibly not equipped yet. The operation thus differs largely and is mentioned in this manual in the corresponding sections.

Key switch
The key switch is optional and is possibly not equipped yet. It serves for enabling operation and has the same function as the password (see section 'Enabling operating level 2').

4.2 Function

4.2.1 The most important functions

Function levels
The fire detection control unit is secured against unauthorized manipulation by the following operating levels:
- Operating level 1: operation always possible
- Operating level 2: control panel only possible with password or key switch
- Operating level 3: operation only possible for the service technician

On operating level 1, only the most important commands in case of alarm can be issued. All other commands are only accessible on operating level 2.

Power supply
The fire detection control unit is always connected to the power supply system. In case of a mains failure the control unit is fed from the built-in batteries. Battery operation in case of mains failure is limited.

4.2.2 Detector zones

In the fire detection system, several detectors are always combined in a so-called detector zone. Depending on the version, the control unit monitors 2, 4, 8, 12 or 24 detector zones.

Up to 32 detectors can be connected to one detector zone. In case of fire, only the detector zone of the alarming detector is indicated on the control unit. It is thus important to know where the detectors of the individual detector zones are located.

The service technician has handed over a building plan to you, in which the allocation of the detectors to the detector zones is indicated.

4.2.3   Operating modes

The fire detection control unit has the following mode of operations:

- 'Unmanned'
  This operating mode must be set when no instructed staff is present. In case of alarm or fault, remote transmission (e.g. to the fire brigade) is activated immediately.
- 'Manned'
  In this operating mode instructed staff is present, who is involved in the process in case of alarm or fault. In this operating mode, an alarm or fault signal activates the remote transmission (e.g. to the fire brigade) only after the expiry of a defined period of time.

Manual switchover between 'Manned' and 'Unmanned'
The switchover between the operating modes 'Manned' and 'Unmanned' may always be performed manually.

Automatic switchover between 'Manned' and 'Unmanned'
With fire detection system with an indicator module, automatic switchover is possible. At maximum two switchover times may be defined.

Automatic switchover between summer time and winter time
With fire detection systems with an indicator module, switching over between summer time and winter time can be effected automatically.

4.2.4 Alarms

An alarm is triggered when:
- a manual call point has been activated,
- an automatic detector has detected a fire.

The process in case of alarm depends on:
- the operating mode set ('Manned' or 'Unmanned');
- the zone type selected (internal, via timer V1 and V2 or direct)

The following figure shows the processing of alarms:
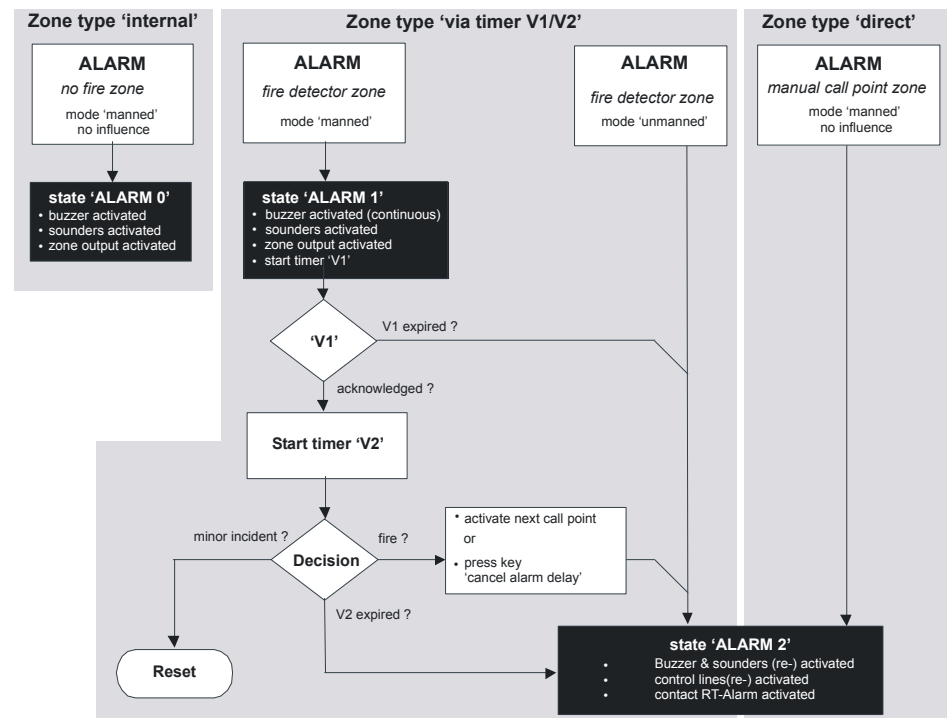
Fig. 3   Flow diagram in case of alarm

Process: Zone type direct
In case of alarm, the fire brigade is called up immediately.

Process: Zone type via timer V1 and V2
With this zone type, the process depends on the operating mode set. As a rule:
- in operating mode 'Unmanned'
  In case of alarm, the fire brigade is called up immediately.
- in operating mode 'Manned'
  During V1 the staff may acknowledge the alarm. During V2 the staff may check whether it is a real fire or false alarm.

Process: Zone type internal
Alarm is only indicated on the control unit, it is not transmitted to the fire brigade.

4.2.5 Faults

The fire detection control unit includes a comprehensive self-monitoring functionality. When the control unit detects an error in the system (e.g. a detector is removed), this is signaled as fault. Faults are normally transmitted to a receiving station. Faults should always be remedied as quickly as possible.

The process with a fault depends on the set operating mode 'Manned' or 'Unmanned' (see figure below).
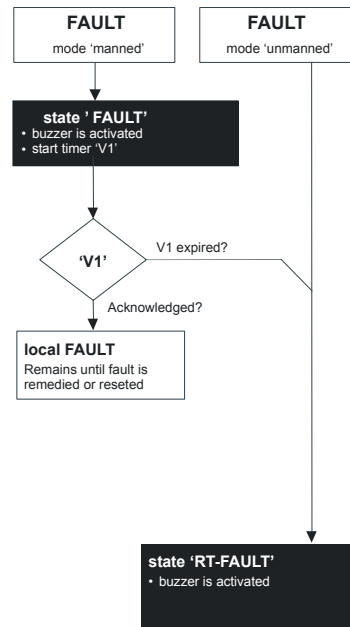
Fig. 4   Flow diagram in case of fault

Process in operating mode 'Unmanned'
The fault automatically activates the remote transmission for faults.

Process in operating mode 'Manned'
During V1 the staff may acknowledge the fault. The control unit will indicate the fault until it has been remedied. When the fault is not acknowledged within V1, the remote transmission function is activated.

> **i** Faults are possibly always immediately transmitted to the receiving station (see section 'Configuration'.

4.2.6 Indicator module (on option)

| $\boxed{\mathbf{i}}$ | The indicator module is optional and possibly not equipped in your system. |

The indicator module can display the following information:
- Number of registered alarms (alarm counter)
- Expiry of the delay periods V1 and V2 in case of alarm
- Time
- Events with date and time, e.g. fault (recallable event memory)

4.2.7 Maintenance possibilities

Fire detection systems must be serviced regularly. Only this way can it be ensured that the system works properly in case of emergency. For this reason, regularly perform the following maintenance work:
- Test LED on the control unit
- Test detectors
- Test fire alarm devices such as horns or flash-lights
- Test remote transmission
- Check alarm organization

5   Operation

5.1   Normal operation

In normal operation, the following LED light up:
- 'System ON'
- 'Mode Manned' (if the control unit is in operating mode 'Manned' ist)

5.2   Operating level 2 enabled

General

Normally the fire detection control unit is blocked for operation. Operation (operating level 2) is enabled either by entering the password or by means of the key.

Password

To enable operating level 2 with the password, proceed as follows:

1. Enter the password using the numeric keys.

➔ The LED 'Operating access' lights up and the operation is enabled.

2. To block the operating level 2 again, you will have to wait. The operating level 2 is blocked again automatically 3 minutes after the last input.

➔ The LED 'Operating access' no longer lights up.

Key

To enable operating level 2 with the key, proceed as follows:

1. Insert the key in the lock and turn it clockwise by 90°.

➔ The LED 'Operating access' lights up and the operation is enabled.

2. To block operating level 2 again, take the key from the lock.

➔ The LED 'Operating access' no longer lights up.

5.3   Set operating mode 'Manned'/'Unmanned'

General
You can recognize the set operating mode on the LED 'Manned'.

LED 'Manned'	Operating mode
On	'Manned'
Off	'Unmanned'

When instructed persons are in the building, the operating mode 'Manned' should be set.
For this reason the first instructed person entering the building should set the fire detection control unit to operating mode 'Manned'. The other way round, the instructed person who is the last to leave the building should set the fire detection control unit to operating mode 'Unmanned'.

Procedure
To switch between the operating modes 'Manned' and 'Unmanned', proceed as follows:
1. Enable the operating level 2 (password or key).
1. Press the key 'Manned/Unmanned'.
2. Check the setting by means of the LED 'Manned'.

Note on control units with an indicator module
● The automatic switchover between the operating modes 'Manned' and 'Unmanned' depends on the set configuration.
● When switching from 'Unmanned' to 'Manned', it is possible to have the next switchover time from 'Manned' to 'Unmanned' indicated (e.g. 18:00; see table 'Configuration').

5.4   Operation in case of alarm with alarm organization ('Manned')

Important

Alarms always require the quick and controlled intervention of the persons present. For this reason, read this section thoroughly to make sure you make the right decisions in case of emergency.

In case of emergency the following documents are needed:

- Building plan with allocation of the detectors to the detector zones
- Checklist for the operation of the control unit (please copy the next page)

Procedure

In case of alarm the LED 'Alarm' and the red zone LED are flashing rapidly. In case of alarm, proceed as follows:

1. Press the key 'Acknowledge'.

   ➔ The LEDs 'Alarm' and the corresponding red zone LED are flashing slowly.

2. Read the fire location (detector zone).

3. Go to the fire location.

4. Decide whether it is an emergency of a false alarm.

In case of emergency

1. Activate the next manual call point or go back to the control unit and press the key 'Alarm delay' off.

   ➔ The fire brigade is alerted.

   ➔ The LED 'RT Alarm' lights up.

In case of false alarm

1. Go back to the control unit.

2. Press the key 'Reset' on the control unit.

   ➔ The LEDs 'Alarm' and the corresponding red zone LED no longer light up.

   ➔ The control unit is in normal operation again.

Note on control units with an indicator module

- The remaining delay periods V1 and V2 are indicated on the display.
- All other indications are overwritten during the alarm.

Copy this page and keep it ready in case of alarm!

Alarm (red LEDs are flashing rapidly)

⬇

Press red key

⬇

Read off fire location

⬇

Go to the fire location

🏃

Decide!

↙ ↘

No fire	Fire
✖	🔥
⬇	⬇
Back to the control unit	Activate next manual call point
🏃	🅕
Press green key	
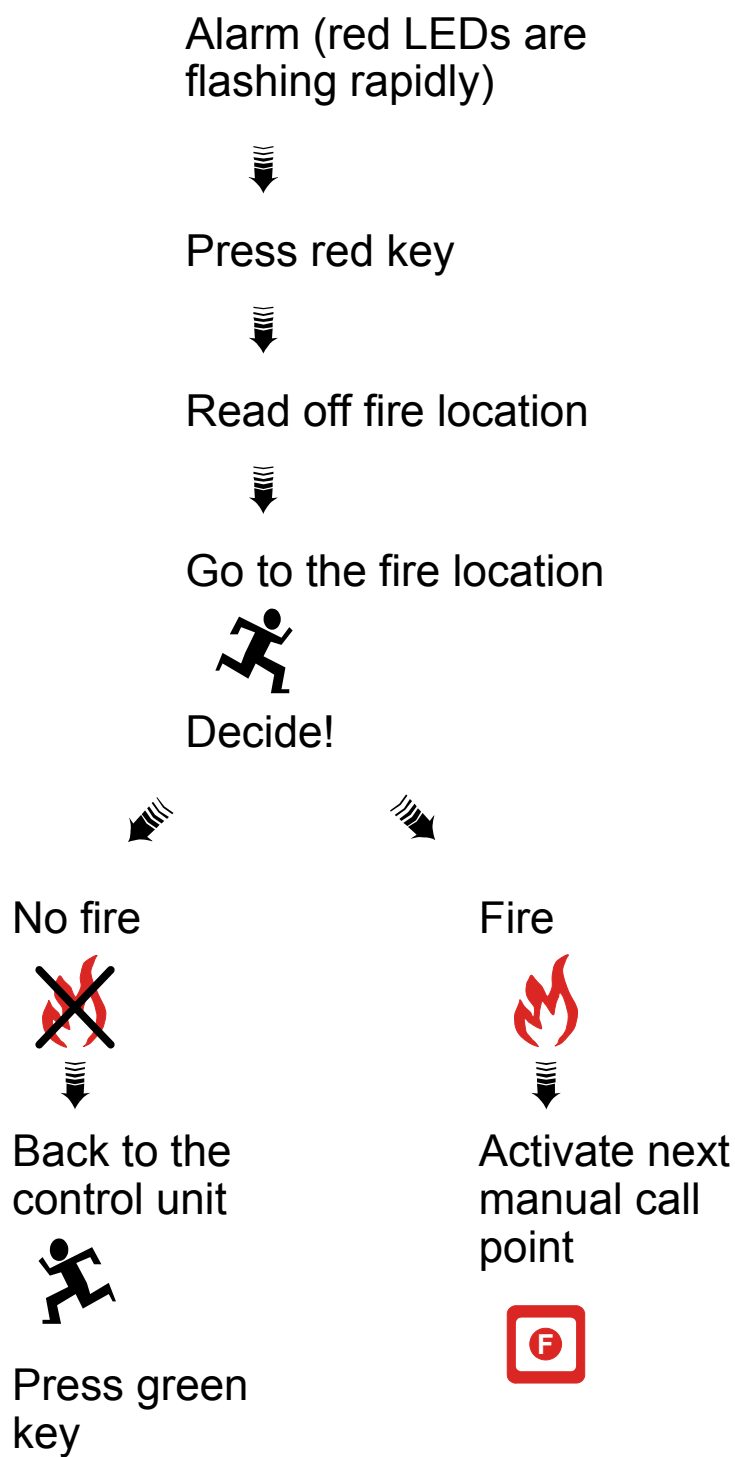
5.5 Activating an evacuation

Overview

It is possible to activate an evacuation without an alarm being triggered by a detector. In this case no alarm message is transmitted to the fire brigade.

Procedure

To activate an evacuation, please proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'Evacuation'.

→ The LED 'Evacuation' lights up.

→ The fire alarm devices (e.g. horns) are activated

3. To cancel the evacuation, press the key 'Evacuation' again.

→ The LED 'Evacuation' no longer lights up.

→ The fire alarm devices (e.g. horns) are deactivated

→ The control unit is in normal operating condition again.

5.6 Switching off system parts

In certain situations (e.g. renovation work) it may make sense to switch off parts of a system. When a system part is switched off, the LED 'Part of system OFF' is always on.

⚠	**WARNING!**	System parts that have been switched off may possibly hamper the correct recording or processing of alarms or faults! For this reason, always switch these system parts on again as soon as normal operating conditions are prevailing again!

5.6.1 Switching off detector zones

Overview

To avoid unintended alarm messages, in exceptional cases detector zones must be disconnected from the system, i.e. switched off. In which cases a detector zone shall be switched off depends on the detectors used and the deceptive phenomena (e.g. smoke or dust).

⚠	**WARNING!**	Detector zones that have been switched off cannot trigger alarms or faults! For this reason, always switch these detector zones on again as soon as normal operating conditions are prevailing again!

⚠	**NOTE!**	Manual fire alarm call points may possibly trigger alarm even when the detector zone is switched off (see section 'Configuration').

Procedure

To switch a detector zone off, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the desired detector zone key.

→ The yellow zone LED lights up.

→ The zone is now switched off and you can perform the intended work on the detector zone without an alarm or fault being remotely transmitted.

3. To switch the zone on again, press the desired detector zone key twice.

→ The yellow zone LED no longer lights up.

→ The zone is switched on again.

5.6.2   Temporarily switching off alarm devices

Overview

To avoid the unintended activation of alarm devices, the alarm devices must be switched off in exceptional cases.

⚠	**WARNING!**	Alarm devices that have been switched off are not activated in case of alarm! For this reason, always switch these alarm devices on again as soon as normal operating conditions are prevailing again!

Procedure

To switch the alarm devices off, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'Alarm horn Disable/Enable'
   ➔ The yellow LED 'Alarm horn' lights up.
   ➔ All alarm devices are now switched off and you may perform the intended work without the alarm devices being activated.

3. To switch the alarm devices on again, press the key 'Alarm horn Disable/Enable' three times.
   ➔ The yellow LED 'Alarm horn' no longer lights up.
   ➔ All alarm devices are switched on again.

5.6.3   Temporarily switching off fire control installations

Overview

To avoid the unintended activation of fire control installations, these must be switched off in exceptional cases.

⚠	**WARNING!**	Fire control installations that have been switched off are not activated in case of alarm! For this reason, always switch these fire control installations on again as soon as normal operating conditions are prevailing again!

Procedure

To switch the fire control installations off, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'Control Disable/Enable' twice.'
   ➔ The yellow LED 'Controls' lights up.
   ➔ All fire control installations are now switched off and you may perform the intended work without the control installations being activated.

3. To switch the fire control installations on again, press the key 'Control Disable/Enable' twice.
   ➔ The yellow LED 'Controls' no longer lights up.
   ➔ All fire control installations are switched on again.

5.6.4 Switching fire control installations and alarm devices temporarily off

Overview

To avoid the unintended activation of fire control installations and alarm devices, these must be switched off in exceptional cases.

⚠	**WARNING!**	Fire control installations and alarm devices that have been switched off are not activated in case of alarm! For this reason, always switch these fire control installations and alarm devices on again as soon as normal operating conditions are prevailing again!

Procedure

To switch the fire control installations off, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'Control Disable/Enable' three times.

➔ The yellow LED 'Alarm horn' and 'Controls' light up.

➔ The fire control installations and alarm devices are now switched off and you may perform the intended work without the control installations being activated.

3. To switch the fire control installations and alarm devices on again, press the key 'Control Disable/Enable' once.

➔ The yellow LED 'Alarm horn' and 'Controls' no longer light up.

➔ The fire control installations are switched on again.

5.6.5 Temporarily blocking remote transmission of faults

Overview

If in exceptional cases faults shall not be remotely transmitted, the remote transmission of faults must be blocked.

⚠	**WARNING!**	Remote transmission functions that have been blocked are not activated in case of a fault! For this reason, always enable blocked remote transmission functions again as soon as normal operating conditions are prevailing again!

Procedure

To block the remote transmission of faults, please proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'RT-FAULT Disable/Enable'.

➔ The yellow LED 'RT-FAULT' lights up.

➔ The remote transmission of faults is now blocked and you can carry out the intended work.

3. To enable the remote transmission of faults again, press the key 'RT-FAULT Disable/Enable" three times.

➔ The yellow LED 'RT-FAULT' no longer lights up.

➔ The remote transmission of faults is enabled again.

5.6.6 Temporarily blocking remote transmission of alarms

Overview

If in exceptional cases alarms shall not be remotely transmitted, the remote transmission of alarms must be blocked.

⚠	**WARNING!**	Remote transmission functions that have been blocked are not activated in case of an alarm! For this reason, always enable blocked remote transmission functions again as soon as normal operating conditions are prevailing again!

Procedure

To block the remote transmission of alarms, please proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'RT-ALARM Disable/Enable' twice.

➔ The yellow LED 'RT-ALARM' lights up.

➔ The remote transmission of alarms is now blocked and you can carry out the intended work.

3. To switch the remote transmission of alarms on again, press the key 'RT-Alarm Disable/Enable' twice.

➔ The yellow LED 'RT-ALARM' no longer lights up.

➔ The remote transmission of alarms is enabled again.

5.6.7 Temporarily blocking remote transmission of alarms & faults

Overview

If in exceptional cases alarms or faults shall not be remotely transmitted, the remote transmission of alarms and faults must be blocked.

⚠	**WARNING!**	Remote transmission functions that have been blocked are not activated in case of an alarm or fault! For this reason, always enable blocked remote transmission functions again as soon as normal operating conditions are prevailing again!

Procedure

To block the remote transmission, please proceed as follows:

1. Enable the operating level 2 (password or key).

2. Press the key 'RT-ALARM Disable/Enable' three times.

➔ The yellow LEDs 'RT-FAULT' and 'RT-ALARM' light up.

➔ The remote transmission of alarms and faults is now blocked and you can carry out the intended work.

3. To switch the remote transmission on again, press the key 'RT-ALARM Disable/Enable' once.

➔ The yellow LED 'RT-FAULT' and 'RT-ALARM' no longer light up.

➔ The remote transmission of alarms and faults is enabled again.

5.7   Polling event memory

Overview

[i]   This function is only available with control units with an indicator module.

The event memory records event with date and time. These event can be polled at any time. Each event has an event number. This number is displayed on the indicator module (e.g. E.012.). The most recent event has the lowest number (E.001.). The event is indicated by means of the LED. An alarm on zone 4, for example, is indicated by the red zone LED 4.

Procedure

To poll the event memory, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Keep the key 'Acknowledge' pressed and enter the code '1122' with the numerical keys.

➔ The indicator module displays 'E.001.' (most recent event).

➔ The type of event is indicated by the LEDs (see table below).

3. Poll the year of the event with the numeric key '1', the month with the key '2' and the time with the key '3'.

➔ The indicator module displays e.g. '2004'

4. To indicate the next event, press the key 'Reset'.

➔ The indicator module displays 'E.002'.

To get back to the most recent event, press the numeric key '4'.

➔ The indicator module displays 'E.001.'

5. To quit the event memory, press the numeric key 'Acknowledge'.

➔ The system is in normal operating condition again.

You will quit the event memory automatically when you do not enter any data for more than one minute.

Indication	Signification
Red zone LED	Alarm of the corresponding zone
'Remote transmission'	Remote transmission activated
'Part of system OFF'	System part has been out of service
'Fault'	A fault has occurred in the system
'Evacuation'	Evacuation has been activated

Tab. 4   Meaning of the LED display

5.8 Setting date and time

Overview

This function is only available with control units with an indicator module.

Control units with an indicator module are equipped with an integrated clock. In countries in which the Central European Summertime is valid, this clock automatically switches between summer and winter time. In all other countries the settings must be made manually.

The clock must also be set when the fire detection control unit has been disconnected from the power supply system for a longer period of time.

Procedure

To set the date and time, proceed as follows:

1. Enable the operating level 2 (password or key).

2. Keep the key 'Reset' pressed and enter the code '4233' with the numerical keys.

3. Acknowledge the entry by pressing the key 'Acknowledge'.
  → The LEDs 'Manned' and 'Operating access' are flashing.
  → The indicator module displays '1_.xx' (xx = year)

4. Set the desired year with the numerical keys '1' and '2'.

5. Acknowledge the entry by pressing the zone key '1'.

6. Press the key 'Reset'.
  → The indicator module displays '2_.xx' (xx = year)

7. Repeat the steps 4 to 6, thus setting the day, the hours and the minutes.

8. Exit the settings with the numerical key '4'.
  → The settings have been stored.
  → The system is in normal operating condition again.

6 Maintenance

6.1 Important notes

Only a well-serviced fire detection system remains functional in case of emergency. For this reason, regularly perform the recommended maintenance work or have them performed by a service technician (see table below). At any rate, observe the local regulations.

Maintenance work	Interval
Check detector network	annually
Check control unit	annually
Simulate alarm	annually
Simulate fault	annually

Tab. 5   Maintenance work intervals

6.2 Check detector network

Overview
Check the detector network once a year. In this way the functionality of the fire detection system can be ensured.

Procedure
Check the detector network as follows:
1. Enable the operating level 2 (password or key).
2. Either: for detector test
   Press the desired detector zone key twice.
   ➔ The yellow zone LED and the LED 'Detector test' are flashing.
   ➔ The LED Part of system OFF lights up.
   Or: for detector test including walk test:
   Press the desired detector zone key twice, then immediately afterwards the numerical key '4' during 2 seconds.
   ➔ The yellow zone LED and the LED 'Detector test' are flashing.
   ➔ The LED 'Part of system OFF' lights up.
3. Successively activate an alarm with all detectors in this zone.
   ➔ The red zone LED on the control unit lights up for approximately 10 seconds. No alarm is transmitted to the fire brigade.
   ➔ When under Item 2 you have activated the detector test including walk test, the alarm devices are activated for a short period of time with each alarm activation.
4. To switch the zone on again, press the desired detector zone key once.
   ➔ The yellow zone LED and the LED 'Detector test' are no longer flashing.
   ➔ The LED 'Part of system OFF' no longer lights up.
   ➔ The system is in normal operating condition again.

6.3   Check control unit

Overview

This test intends to check whether the optical and acoustic elements of the control unit function faultlessly.

Procedure

Check the control unit as follows:

1. Press the key 'Lamp test/Sounder test'
   ➔ The buzzer sounds.
   ➔ All LEDs light up.
2. Check whether all LEDs light up and the buzzer sounds.

6.4   Simulate alarm

Overview

By simulating an alarm you can check the following functions of the fire detection system:
- Remote transmission (e.g. transmission to the fire brigade)
- Alarming devices (e.g. horns and flashlights).
- Fire control installations

⚠	**WARNING!**	Before simulating an alarm, inform the fire brigade to avoid an unnecessary turning out.

⚠	**WARNING!**	Activate the fire control installations only when you are sure that no damage will occur. When you are not sure, switch the fire control installations off.

Procedure

Simulate an alarm as follows:

1. Inform accordingly (e.g. the fire brigade) on the pending simulation.
2. Press the numerical key '1' and keep it pressed.
3. Press the zone key '1'.
   ➔ Alarm is simulated.
   ➔ The red zone LED lights up.
   ➔ The alarm sequence has been activated.
4. Check whether the alarm sequence is correct. Zones with manual call points will trigger alarm immediately. Zones with automatic detectors will trigger alarm after the expiry of the delay periods V1 and V2.
5. Check whether the fire control installations have responded correctly.
6. To finish the simulation, press the key 'Acknowledge', then the key 'Reset'.
7. Repeat steps 2 to 5 for all zones.

6.5 Simulate fault

Overview

By simulating a fault it is possible to check the remote transmission equipment for faults (e.g. transmission to the fire brigade).

⚠	**WARNING!**	Before simulating a fault, inform accordingly to avoid an unnecessary turning out.

Procedure

Simulate a fault as follows:

1. Inform accordingly on the pending simulation.

2. Press the numerical key '2' and keep it pressed.

3. Press the zone key '1'.
  ➔ A fault is simulated.
  ➔ The yellow zone LED is flashing rapidly.
  ➔ The fault sequence has been activated.

4. Check whether the fault sequence is correct.

5. To finish the simulation, press the key 'Reset'.

7 Troubleshooting

This section provides you with information in case of a system disturbance, or when the system is not in normal operation. The table below provides a list of possible faults with notes on possible causes.

Fault	Cause/Remedy
LED 'Fault' is flashing	Fault in the system **1.** Check whether another yellow LED is flashing. **2.** If no other yellow LED is flashing, contact the service technician.
LED 'Fault power supply' is flashing	Fault in the power supply **1.** Check the external mains fuse. **2.** When the mains fuse is in order, contact the service technician.
Yellow zone LED is flashing	Fault in a zone **3.** Check whether all detectors are inserted. **4.** If all detectors are inserted and the yellow LED keeps flashing, contact the service technician.
LED 'Earth fault' is flashing	Contact the service technician
LED 'Fault control unit' is flashing	
LED 'Fault alarm horn' is flashing	
LED 'Fault controls' is flashing	
LED 'Remote transmission fault' is flashing	
LED 'RT alarm' is flashing	
The indicator module indicates: '88.88' (point is flashing)	Clock not set (see section 'Setting date and time')
The indicator module indicates: '.' (point is flashing)	Fault in the power supply **5.** Verify whether the mains supply is available. **6.** Contact the service technician.

Tab. 6 Troubleshooting

When you cannot remedy a fault by means of these operating instructions, contact the service technician.